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The role of interleukine-12 in protection induced by CpG ODN against Listeria monocytogenes in BALB/c and C57BL/6

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Abstract

Synthetic oligodeoxynucleotides containing CpG motifs have several immune effects such as cytokine production in normal mice. In this study, we demonstrated the protective effect ofCpGODNagainst Listeriamonocytogenes in BALB/c and C57BL/6.With a single dose of 40 μg/mouse of CpG ODN 48 h before bacterial challenge, protection was achieved in both strains of mice based on survival rates compared with controls. Serum IL-12 from each mouse was measured by using enzyme-linked immunosorbent assay (ELISA), at day 0 (48 h afterCpGtreatment) and at days 5, 11, and 15 after bacterial challenge. It was shown that serum IL-12 was only elevated at day 0 in BALB/c mice. However, for C57BL/6 mice, IL-12 was elevated at days 0, 5, and 11. These data support the hypothesis that CpG DNA motifs activate protective innate immune defenses. © Springer-Verlag London Limited 2006.

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